

RESPONSE UNDER 37 C.F.R. §1.116
USSN: 09/269,972
ATTY. DOCKET NO.: Q53854

REMARKS

Claims 1-19 are presently pending in this application.

The present Office Action derives from Applicant's Request for Continued Examination and accompanying Amendment filed on September 22, 2005. In such Amendment, the claims were amended to further define that the claimed conversion system of the present invention is a neural conversion system. This amendment was made in view of the Board of Patent Appeals and Interferences' (BPAI) decision dated August 15, 2005, upholding the final rejection of the claims. In particular, the BPAI found that claims 1-7, 9-13 and 15-19 were anticipated by Kamegawa, *et al.* (U.S. Patent No. 5,710,718), and that claims 8 and 14 were unpatentable over Kamegawa, *et al.* in view of Tang (U.S. Patent No. 6,061,673).

In this Office Action, the Examiner rejects claims 1-19 under 35 U.S.C. §103(a) as being unpatentable over Kamegawa in view of Tang, which are the same references previously applied in rejecting the claims.

The Examiner further makes the rejection of the claims a final rejection, stating on page 8 of the Office Action that these grounds of rejection were already argued and affirmed by the BPAI decision rendered on August 12, 2005, and that under the legal theory of *Res judicata*, the claims have been determined to be unpatentable and are, therefore, rejected. Applicant respectfully traverses this final rejection.

Res judicata is a common law doctrine meant to bar relitigation of cases between the same parties in court. *Res judicata* includes the concept of claim preclusion which focuses on barring a suit from being brought again on a legal cause of action that has already been finally decided between the parties. In this case, claims 1-7, 9-13 and 15-19 have never been rejected under 35 U.S.C. §103(a) based on a combination of Kamegawa and Tang, nor has the BPAI considered any such rejection. The BPAI does discuss incorporating the features of Tang into the

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Kamegawa system; however, this discussion is limited to the particular features and the rejection of claims 8 and 14. As such, the doctrine of *Res judicata* does not apply and a final Office Action at this time is improper.

In the Amendment filed on September 22, 2005, Applicant argued with respect to the Tang reference, as seen in the flowchart of Fig. 5 of the present application, the processing conducted in the present invention from start to Step 130 involves using a neural network to estimate the number of extreme values of a solution space. In Step 132, the genetic algorithms and linear planning method of Kamegawa are employed in the optimization. Applicant further argued that even if, for example, the genetic algorithm of Kamegawa was modified into a multi-layered feed forward type neural network as in Tang, it is not possible to perform the optimization shown in Step 132 of the present invention. For this reason, Applicant argued that the Examiner was technically incorrect with regard to the incorporation of Tang's neural network into Kamegawa's system. Those arguments still hold true and are incorporated herein.

To further explain, a genetic algorithm (Kamegawa) is a method for searching an optimized solution directly by repeating calculations without inferring a solution space. Therefore, a longer time is generally required to determine the solution. While, a neural network (Tang) is a method that does infer a solution space (for example, a shape of a mountain as shown in Fig. 9 of the present application), the neural network essentially does not include optimization as shown in Step 132 of the present application. Therefore, even if the features of Tang could be incorporated into Kamegawa's system, it simply would not be possible to perform the optimization process in Step 132 of the present invention. As such, one of ordinary skill in the art at the time of invention would not have been motivated to replace or transform the genetic algorithm of Kamegawa with a neural network used in Tang.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue that the

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Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned attorney at the local telephone number listed below.

The USPTO is directed and authorized to charge all required fees (except the Issue/Publication Fees) to our Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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